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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/630,720	07/31/2003	Seong Ho Kang	YHK-0114	9367
34610	7590	03/14/2005	EXAMINER	
FLESHNER & KIM, LLP P.O. BOX 221200 CHANTILLY, VA 20153			VU, DAVID HUNG	
			ART UNIT	PAPER NUMBER
			2828	

DATE MAILED: 03/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/630,720

Applicant(s)

KANG ET AL

Examiner

David Vu

Art Unit

2828

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12/8/04
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-9, 12-15, 18, 19, 23, 25, 27 and 30-32 is/are rejected.
- 7) ☒ Claim(s) 6, 10, 11, 16, 17, 20-22, 24, 26, 28 and 29 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 8/23/04
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Specification***

1. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

### ***Claim Objections***

2. Claims 12 and 23 are objected to because of the following informalities:  
"different than" should have been ---different from---.
3. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 12, 23, 25, 27, and 30-32 are rejected under 35 U.S.C. 102(b) as being anticipated by Takayoshi, Japan Pat No 228820 (of record).

Takayoshi discloses a method of driving a plasma display panel having first Y and second X row electrodes and including a sustain period for implementing a gray scale, comprising alternately applying first and second sustain pulses with different widths during the sustain period to the first and second row electrodes, abstract, figures 2, 3, 6, 11.

Art Unit: 2828

Regarding claim 25, a width of first sustain pulse 251 (of the first row Y) is longer than that of second sustain pulse 252 (of the second row X) (figure 2).

Regarding claim 27, figure 11 shows second sustain pulse 233a is longer than first sustain pulse 234.

Regarding claims 31-32, figure 2 shows first sustain pulses applied to scan electrodes Y and second sustain pulses applied to sustain electrodes Y during sustain period.

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 1-5, 7-9, 12-15, 18-19, 23, 25, 27, and 30-32 are rejected under 35 U.S.C. 103(a) as being obvious over applicant's admitted prior art figures 2-4 and specification pages 1-7 in view of Takayoshi, Japan Pat No 228820.

Applicant's admitted prior art essentially discloses a plasma display panel having first Y and second Z row electrodes and including a sustain period for implementing a gray scale, inherently comprising alternately applying first and second sustain pulses SUS1, SUS2 during the sustain period to the first and second row electrodes. Applicant's admitted prior art does not explicitly disclose the sustain pulses having different width. Takayoshi discloses a plasma display panel having sustain pulses in sustain periods

Art Unit: 2828

with different widths (abstract, figures 2, 3, 6, 11). Thus, it would have been obvious to one having ordinary skill in the art at the time of applicant's claimed invention was made to have provided sustain pulses having different widths so as to improve picture quality.

Regarding claims 2-3, 13-14, page 2 discloses the resistance going from the first driver 32 into the first row electrode is larger than a resistance going from the second driver 34 into the second row electrode.

Regarding claims 4-5, 15, and 25, a width of first sustain pulse 251 (of the first row Y) is longer than that of second sustain pulse 252 (of the second row X) and the first sustain pulse is longer than the second sustain pulse (figure 2).

Regarding claims 7 and 18, it would have been an obvious matter of design consideration to employ the resistance going from the second driver into the second row electrode is larger than a resistance going from the first driver into the first row electrode since applicant has not disclosed that this larger resistance solves any stated problem or is for any particular purpose and it appears that the combination of applicant's admitted prior art and Takayoshi device would perform equally well with resistance going from the second driver into the second row electrode is larger than a resistance going from the first driver into the first row electrode.

Regarding claims 8-9, 19, and 27, figure 11 shows width of the second sustain pulse 233a is longer than that of the first sustain pulse 234 and the second sustain pulse is longer than the first sustain pulse.

Regarding claims 31-32, figure 2 shows first sustain pulses applied to scan

Art Unit: 2828

electrodes Y and second sustain pulses applied to sustain electrodes Y during sustain period.

### ***Allowable Subject Matter***

8. Claims 6, 10-11, 16-17, 20-22, 24, 26, and 28-29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Response to Arguments***

9. Applicant's arguments, filed 12/08/2004, have been fully considered.

Applicant argues that the specification pages 1-7 do not state that figures 2-4 or the discussion thereof constitutes "prior art". The Examiner disagrees. At least page 2 line 27 states that figure 2 is a conventional AC surface-discharge PDP. Page 9, "brief description of the drawings" indicates figures 1-5 show conventional PDP and its related waveforms.

The Lim reference is now withdrawn and replaced by the Takayoshi reference.

Regarding the Takayoshi reference, cited figures and pointed-out elements (i.e., figure 2, pulses 251, 252, etc) by the Examiner are for illustrating only. Accordingly, applicant should review all figures and corresponding elements which may be applicable to the rejections of the claimed subject matter.

Art Unit: 2828

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Vu whose telephone number is (571) 272-1831. The examiner can normally be reached on M-F 8am-430pm.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



David Vu  
Primary Examiner  
Art Unit 2828

dv